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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,141	06/21/2006	Jeremy Barnes	B828.312-0001	9053

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EXAMINER	
WILLIAMS, LUANA	
ART UNIT	**PAPER NUMBER**
1794	
MAIL DATE	**DELIVERY MODE**
11/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/565,141	BARNES ET AL.	
	Examiner	Art Unit	
	LUANA Z. WILLIAMS	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *31 and 33-43* is/are pending in the application.

4a) Of the above claim(s) *40-43* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31 and 33-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 March 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The Amendment filed in the Applicant's response on June 30, 2009 is acknowledged. Claims 31, 33-43 remain pending in the Application. Claim 32 is cancelled, and claims 40-43 are withdrawn. The Objection to claim 32 is withdrawn.

Election/Restrictions

2. Applicant's election of Group I in the reply filed on June 30, 2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). This application contains claim 40-43 drawn to an invention nonelected. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 31, 33-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lima [US Pat. No. 6,503,547].

5. Lima teaches a method of protecting perishable products with an atmosphere of ozone in a concentration of 0.1ppm, for 8 hours, at 12º C (Col. 3, Lines 45-67) in a substantially closed room in which natural perishable products are stored (the examiner treats this as equivalent to a “crop store” as in Claim 39) (Col. 2, Lines 26-29). These values anticipate their counterpart values in Claims 31-36 and 38. Examiner interprets the language, “a method of stimulating the endogenous defense mechanism of a perishable harvested crop product against microbial attack for a period of effective defense," to be having the same purpose or intended use as a method of protecting perishable products as disclosed by Lima. Examiner notes that if the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, then the preamble is not considered a limitation and is of no significance to claim construction. Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999) (see MPEP §2111.02).

6. Lima does not teach that its natural perishable products are harvested crop (Claim 31), arranging the perishable products in a matrix in a substantially closed environment (as in Claim 31), suppressing the expression of signal transduction genes of the perishable harvested crop products (Claim 31), removing the products from the substantially closed environment after the period of exposure (as in claim 31), and maintaining the relative humidity in the enclosed environment at around 95% (as in Claim 37).

7. Regarding Claim 31, it is obvious that the natural perishable products of Lima can be harvested crop since Lima discloses that natural perishable products can be a variety of fruits, and that there is no limitation on the type of natural perishable products that can be preserved using the method of Lima (col. 3, lines 1-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Lima so that the natural perishable products are harvested crop products.

8. Regarding the limitation of "suppressing the expression of signal transduction genes of the perishable harvested crop products," this is simply the result of exposing the perishable harvested crop products to ozone. The method disclosed by Lima, which teaches the same concentration of ozone exposure and same exposure time period as the Applicants, is capable of achieving the result of "suppressing the expression of signal transduction genes of the perishable harvested crop products."

9. It would also have been obvious to one of ordinary skill in the art at the time of the invention to arrange the perishable items of Lima in a matrix within the substantially closed room. The term matrix is not defined in applicants' specification. Therefore, the examiner is allowed to give that term its plain and ordinary meaning. Virtually any arrangement of produce could constitute a matrix. A pile of bananas could be a matrix as well as a stack of divided trays filled with avocados. Lima teaches the use of a substantially closed room for treatment and storage of produce (Col. 3, Lines 26-28 and 46-50) and that the produce is placed within the room (Claim 11). If the products were thrown into the room haphazardly, the produce would be arranged in a matrix on the

floor. If the produce were brought in on trays and the trays were stacked, the produce would again be arranged in a matrix. It is obvious, then, that the method of Lima contemplates that the produce would be arranged in a matrix.

10. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to remove the products of Lima from the closed room after the period of exposure, since the products are not intended to remain in the substantially closed room indefinitely.

11. It would have been obvious to one of ordinary skill in the art at the time of the invention that the method of Modified Lima satisfies the limitation "wherein the period of effective defense against microbial attack resulting from suppressing the expression of the signal transduction genes of the perishable harvested crop products is between two and five hundred hours after the period of exposure," since the limitation merely states the result of the process claimed.

12. Regarding claim 37, Lima teaches that the ozonation apparatus used in the disclosed method can include a humidification system. It is well known in the art that 95% RH is favorable for preservation and storage of produce. It would, therefore, have been obvious to a person skilled in the art at the time of invention to maintain the humidity of the enclosed environment at around 95%.

Response to Arguments

13. Applicant's arguments with respect to claims 31-39 have been considered but are moot in view of the new ground(s) of rejection.

14. In regards to the argument that the combination of references do not suggest all limitations of the claims, this is found to be unpersuasive. Regarding the preamble of claim 31, the recited purpose or intended use of "stimulating the endogenous defense mechanisms of a perishable harvested crop product against microbial attack for a period of effective defense" does not result in a manipulative difference between the claimed invention and Modified Lima. In addition, the limitation of "suppressing the expression of signal transduction genes of the perishable harvested crop products" in claim 31, is merely the result of exposing the perishable harvested crop products to ozone. Lima discloses a process of preserving natural perishable products by exposing the products to ozone, and the process of Lima is capable of producing the result of "suppressing the expression of signal transduction genes of the perishable harvested crop products."

15. In regards to the argument that one skilled in the art would not have been motivated to practice the currently claimed invention, this is unpersuasive. Applicant argues that at the time of the invention, ozone had been recognized for its bactericidal and fungicidal effects, of utilizing ozone as a disinfectant to eliminate organisms from the surface of perishable products; and that ozone was not used for inducing endogenous defense mechanisms in the perishable products by suppressing the signal transduction genes in those products. Examiner notes that when the claim recites using an old composition or structure and the "use" is directed to a result or property of that composition or structure, then the claim is anticipated (see MPEP §2112.02). In this case, the "use" of ozone stated by the Applicants is merely directed to a result of

exposing ozone to perishable crop products. The use of ozone, as disclosed by the Applicants, is still directed to the preservation of perishable products, which is the same use disclosed by Lima. The process of Lima directly results in the use of ozone as claimed by the Applicants. Therefore, it would have been obvious to one of ordinary skill in the art to perform the process of the Applicant's invention since the process steps disclosed by Modified Lima are the same.

16. In regards to the argument that one skilled in the art would not have had a reasonable expectation of success in practicing the claimed invention, this is unpersuasive. Applicants' claim of a new use of inducing endogenous defense mechanism in perishable products by controlling gene expression is merely a discovery, which results from the process of using ozone to preserve perishable products. The Applicants' have not recited new process steps to deem the claimed invention patentable over the prior art. Therefore, the rejections under 103(a) over Lima are maintained.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUANA Z. WILLIAMS whose telephone number is 571-270-1152. The examiner can normally be reached on 8:30 AM - 5:00 PM.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. Z. W./ /Rena L. Dye/

Examiner, Art Unit 1794
11/13/2009

Supervisory Patent Examiner
Art Unit 1794